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Dan C. Hu  
TROP, PRUNER & HU, P.C.  
Ste. 100  
8554 Katy Freeway  
Houston, TX 77024

EXAMINER

NGUYEN, DAVID Q

ART UNIT PAPER NUMBER

2681

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/696,491

Applicant(s)

PARANCHYCH ET AL.

Examiner

David Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6-24, 26, 28 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6-24, 26, 28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 33-36 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 2-32, drawn to a system and a method for adjusting a power control element based on the detected errors in control and traffic signaling, classified in class 455, subclass 522.
  - II. Claims 33-36, drawn to a system and method for performing outer loop power control based on the monitored errors, classified in class 375, subclass 358.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because performing outer loop power control based on the monitored errors is classified in class 375, subclass 358. The subcombination has separate utility such as performing outer loop power control based on the monitored errors.

The inventions are distinct, each from the other because of the following reasons:

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Dan Hu (40025) on May 3, 2004, a provisional election was made with traverse to prosecute the invention of group I, claims 2-32.

During a telephone conversation with Dan Hu (40025) on May 3, 2004 a provisional election was made with traverse to prosecute the invention of group I, claims 2-32.

Affirmation of this election must be made by applicant in replying to this Office action.

6. Claims 33-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 2-4,6-24,26,28, and 30-36 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 2-4,6-18, 20-22,26,28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al (US 6671266) in view of Weaver et al. (US Patent Number 5727033).

**Regarding claim 4**, Moon et al disclose a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising: detecting an error in reception of predetermined information in a link between the base station and the mobile unit when traffic channels are not being communicated (see col. 9, lines 1-20; fig. 2); adjusting a power control element based on the detected error (see col. 9, lines 5-15; fig. 2). Moon et al are silent to disclose wherein adjusting the power control element comprises adjusting a target ratio of energy per bit to noise spectral density based on the detected error in the control signaling.

However, Weaver et al disclose adjusting the power control element comprises adjusting a ratio of energy per bit to noise spectral density based on the detected error of voice data and reverse link (see col. 3, lines 45-65 and col. 4, lines 29-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Moon et al in order to improve good signal quality.

**Regarding claim 2**, the method of Moon et al in view of Weaver also discloses wherein detecting the error occurs during a discontinuous transmission mode (see col. 9, lines 1-20; fig. 2 of Moon et al).

**Regarding claim 3**, the method of Moon et al in view of Weaver also discloses receiving a pilot channel from the mobile unit over the link, the control signaling comprising the pilot channel (see fig. 2-4 and col.9, lines 34-40 of Moon et al).

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**Regarding claim 6**, the method of Moon et al in view of Weaver also discloses wherein detecting the error comprises detecting an error in the control signaling over a given period of time (see col. 10, lines 32-55 of Moon et al)

**Regarding claims 7 and 8**, the method of Moon et al in view of Weaver also discloses wherein detecting the error comprises detecting an error in a given number of samples and bits of the control signaling (see col. 3, lines 45-52 of Weaver).

**Regarding claim 9**, the method of Moon et al in view of Weaver also discloses communicating a power control command based on the power control element to affect transmission power of the mobile unit (see col. 9, lines 1-22 of Moon et al).

**Regarding claim 10, Regarding claim 2**, the method of Moon et al in view of Weaver also discloses wherein detecting the error comprises detecting a bit error rate (see col. 3, lines 45-52 of Weaver).

**Regarding claim 11**, the method of Moon et al in view of Weaver also discloses receiving the control signaling over a reverse link (see col. 9, lines 30-53 and fig. 4 of Moon et al).

**Regarding claim 12**, the method of Moon et al in view of Weaver also discloses receiving the control signaling over a forward link (see col. 9, lines 1-23 and fig. 4 of Moon et al).

**Regarding claim 13**, the method of Moon et al in view of Weaver also discloses receiving the control signaling over a link according to a code-division multiple access protocol (see abstract of Moon et al).

**Regarding claim 14**, the method of Moon et al in view of Weaver also discloses detecting that the base station is in discontinuous transmission mode, wherein detecting the error and

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adjusting the power control element are performed while the base station is in the discontinuous transmission mode (see col. 9, lines 1-23 of Moon et al).

**Regarding claim 15**, the method of Moon et al in view of Weaver also discloses detecting that the mobile unit is in discontinuous transmission mode, wherein detecting the error and adjusting the power control element are performed while the mobile unit is in the discontinuous transmission mode (see col. 9, lines 1-23 of Moon et al).

**Regarding claim 16**, the method of Moon et al in view of Weaver also discloses detecting that the mobile unit is in discontinuous transmission mode comprises detecting a power level of a traffic channel transmitted by the mobile unit (see col. 9, lines 1-23 of Moon et al).

**Regarding claims 17 and 18**, the method of Moon et al in view of Weaver also discloses wherein detecting that the mobile unit is in discontinuous transmission mode comprises detecting a state of a predetermined information field; wherein the information field comprises one or more power control bits of data frame transmitted by the mobile unit (see col. 9, line 1 to col. 10, line 67 of Moon et al).

**Regarding claim 20**, Moon et al disclose a system for use in a mobile communications system comprising a receiver to receive control signaling and traffic signaling from a mobile unit (see fig. 1 and fig. 2); a controller to detect whether the mobile unit is in discontinuous transmission mode (see col. 9, lines 1-23); detect for error in the received control signaling from the mobile unit and to adjust a power control condition based on detected error in the received control signaling in response to detecting that the mobile unit is in the discontinuous transmission mode (see col. 9, lines 1-23 and fig. 2)

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Moon et al do not mention the controller detect for error in the traffic signaling from the mobile unit and to adjust the power condition based on detected error in the traffic signaling in response to detecting that the mobile unit is not in the discontinuous transmission mode. However, Weaver et al disclose detect for error in the traffic signaling from the mobile unit and to adjust the power condition based on detected error in the traffic signaling in response to detecting that the mobile unit is not in the discontinuous transmission mode (see col. 3, line 20 to col. 4, line 33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Moon et al in order to improve signal quality of traffic channel.

**Regarding claim 21**, the method of Moon et al in view of Weaver et al also discloses receiving a pilot channel from the mobile unit over the link, the control channel comprising the pilot channel (see fig. 2-4 of Moon et al).

**Regarding claim 22**, the method of Moon et al in view of Weaver et al also discloses the receiver is adapted to receive code division multiple access control signaling (see abstract of Moon).

**Regarding claim 26**, the method of Moon et al in view of Weaver et al does not mention wherein the control and traffic signaling are communicated in a reverse link between the mobile unit and a base station. However, examiner takes official notice that the control and traffic signaling are communicated in a reverse link between the mobile unit and a base station is well known in the art.



**Regarding claim 28**, the method of Moon et al in view of Weaver et al also discloses the power control condition comprises a target ratio of energy per bit to noise spectral density (see col. 3, line 45 to col. 4, line 40).

**Regarding claim 30**, Moon et al disclose an article comprising one or more machine-readable storage media containing instructions for performing tasks in a mobile communications system, the mobile communications system having a mobile unit, a base station, and a link between the mobile unit and base station, the instructions when executed causing a controller to: determine whether the mobile unit is in discontinuous transmission mode (see col. 9, lines 1-23 and explanation in the claim 4 and 20); detect for one or more errors in control signaling received over the link; and adjust a power control element based on the detected one or more errors in the control signaling if the mobile unit is in the discontinuous transmission mode (see col. 9, lines 1-23 and explanation in the claim 4 and 20); adjusting the power control element based on the detected one or more errors in the control signaling if the mobile unit is not in the discontinuous transmission mode (see col. 10, lines 6-60). Moon et al are silent to disclose detect for one or more errors in traffic signaling received over the link;

However, Weaver et al disclose detecting for one or more errors in traffic signaling received over the link (see col. 3, lines 46-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Moon et al in order to improve good signal quality.

**Regarding claims 31-32**, the system of Moon et al in view of Weaver also discloses instructions that when executed cause the controller to increase or decrease a target ratio of

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energy per bit to noise spectral density if an error rate exceeds or does not exceed threshold (see col. 4, lines 29-32 of Weaver).

9. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al (US 6671266) in view of Weaver et al. (US Patent Number 5727033) and further in view of the admitted prior art.

**Regarding claim 19**, the method of Moon et al in view of Weaver wherein adjusting the power control element is based on the detected error if the mobile unit is detected to be in the discontinuous transmission mode (see col. 9, line 1 to col. 10, line 67 of Moon et al).

They do not mention adjusting the power control element is based on the frame error rate of the traffic channels when the mobile unit is detected to be not in the discontinuous transmission mode.

However, the admitted prior art mentions adjusting the power control element is based on the frame error rate of the traffic channels when the mobile unit is detected to be not in the discontinuous transmission mode (see page 2, lines 10-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the admitted prior art to the method of Moon et al in view of Weaver in order to improve good signal quality.

**Regarding claim 24**, the method of Moon et al in view of Weaver et al does not mention wherein the traffic signaling is not transmitted during discontinuous transmission mode.

However, the admitted prior art mentions the traffic signaling is not transmitted during discontinuous transmission mode (see page 1, lines 28-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the

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above teaching of the admitted prior art to the method of Moon et al in view of Willenegger in order to improve system.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al (US 6671266) in view of Weaver et al. (US Patent Number 5727033) and further in view of Chen et al. (US Patent Number 6208699).

**Regarding claim 23**, the method of Moon et al in view of Willenegger et al does not mention the receiver is adapted to receive IS-2000 control signal. However, Chen et al. mentions the receiver is adapted to receive IS-2000 control signal (see col. 8, lines 14-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Chen to the method of Moon et al in view of Weaver et al in order to improve system.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 703-605-4254. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika A Gary can be reached on 703-308-0123. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DN

David Nguyen

  
ERIK A GARY  
PATENT EXAMINER